CONTENTS VOL. 113, 1990

Research Papers

Principles of evaluation of soil water residence time using queueing disciplines with water budget data (Theoretical background — I)
B.F. Gamble, Y. Eckstein (Kent, OH, U.S.A.) and W.M. Edwards (Coshocton, OH, U.S.A.). 1
Evaluation of soil water residence time in a monolith lysimeter from the application of queueing disciplines to water budget data (Demonstration — II)
B.F. Gamble, Y. Eckstein (Kent, OH, U.S.A.) and W.M. Edwards (Coshocton, OH, U.S.A.). 27
Dissolved gas evidence for denitrification in the Lincolnshire Limestone groundwaters, eastern England
G.B. Wilson (Cambridge, U.K.), J.N. Andrews (Bath, U.K.) and A.H. Bath (Keyworth, U.K.) 51
A method for modeling water tables at debris avalanche headscarps
P. Buchanan, K.W. Savigny and J. De Vries (Vancouver, B.C., Canada) 61
Watershed scale rainfall interception on two forested watersheds in the Luquillo Mountains of Puerto Rico
F.N. Scatena (Rio Piedras, PR, U.S.A.) 89
Simulation of snowmelt runoff pathways on the Lac Laflamme watershed
R. Barry (Edmundston, N.B., Canada), M. Prévost (Ste-Foy, Que., Canada), J. Stein and A.P. Plamondon (Québec, Que., Canada) 103
Shallow seismic refraction used to map the hydrostratigraphy of Nukuoro Atoll, Micronesia
J.F. Ayers (Lincoln, NE, U.S.A.) 123
Flood estimation in Indian catchments
R.J. Garde (New Delhi, India) and U.C. Kothyari (Roorkee, India) 135
Salinities and sediment transport in the Bolivian highlands
J.L. Guyot, M.A. Roche, L. Noriega, H. Calle and J. Quintanilla (La Paz, Bolivia) . . 147
A derived PDF for the initial soil moisture in a catchment
J.B. Valdés (College Station, TX, U.S.A.), M. Díaz-Granados (Bogotá, Colombia) and R.L. Bras (Cambridge, MA, U.S.A.) 163
The influence of grid discretization on the percolation probability within discrete random fields
S.E. Silliman (Notre Dame, IN, U.S.A.). 177
Kinematic flow approximation to runoff on a plane: solution for infiltration rate exceeding rainfall rate
G.C. Sander, W.L. Hogarth, C.W. Rose (Nathan, Qld., Australia), J.-Y. Parlange (Ithaca, NY, U.S.A.) and R. Haverkamp (Grenoble, France) 193
Modelling snowmelt in a mountainous river basin on an event basis
G. Blöschl, R. Kirnbauer and D. Gutknecht (Vienna, Austria) 207
Origíne des nitrates dans les nappes de fissures de la zone tropicale humide — Exemple de la Côte d'Ivoire
J.-P. Faillat (Montpellier, France) 231
Groundwater discharge to a headwater valley, northwestern Nevada, U.S.A.
B.R. Hill (Lakeview, OR, U.S.A.). 265
Assessment of wet deposition mechanisms in an upland Scottish catchment
R.C. Ferrier, J.D. Miller, T.A.B. Walker, H.A. Anderson (Aberdeen, U.K.) and A. Jenkins (Wallingford, U.K.) 285
Indirect detection of subsurface outflow from a rift valley lake
W.G. Darling, D.J. Allen (Wallingford, U.K.) and H. Armannsson (Reykjavik, Iceland) 297
Organic contamination of the Birmingham aquifer, U.K.

M.O. Rivett, D.N. Lerner, J.W. Lloyd (Birmingham, U.K.) and L. Clark (Medmenham, U.K.). 307
Rainfall and salinity of a Sahelian estuary between 1927 and 1987
J. Pagès and J. Citeau (Dakar, Senegal) 325
Storm-runoff generation in the Permanente Creek drainage basin, west central California — an example of flood-wave effects on runoff composition
K.M. Nolan and B.R. Hill (Menlo Park, CA, U.S.A.) 343

Short Note
Nonlinear, discrete flood event models, 2. Assessment of statistical nonlinearity — correction
B.C. Bates (Wembley, W.A., Australia) 369

Discussions
Numerical analysis of large diameter wells with a seepage face — comment
R. Herbert and J.A. Barker (Wallingford, U.K.) 371
Numerical analysis of large diameter wells with a seepage face — reply
R. Sakthivadivel (Madras, India) and K.R. Rushton (Birmingham, U.K.) 374
Analysis of pump test data for a large diameter well near a hydrogeological boundary — comment
Z. Şen (Jeddah, Saudi Arabia) 377
Analysis of pump test data for a large diameter well near a hydrogeological boundary — reply
V.S. Singh and C.P. Gupta (Hyderabad, India) 380
Deuterium and oxygen-18 studies in groundwater of the Delhi area, India — comment
P.S. Datta (New Delhi, India) 385
Deuterium and oxygen-18 studies in groundwater of the Delhi area, India — reply
B.K. Das (Chandigarh, India), Y.P. Kakar (New Delhi, India), H. Moser and W. Stichler (Neuherberg, F.R.G.) 387
Evaporation from Lake Biwa — comment
F.I. Morton (Wakefield, Que., Canada) 391
Evaporation from Lake Biwa — reply
S. Ikebuchi (Kyoto, Japan) 394

Book Review
International workshop on "Appropriate methodologies for development and management of groundwater resources in developing countries".
J.S.G. McCulloch (Abingdon, U.K.) 397

Announcement 399